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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/782,320	02/13/2001	Bernhard H. van Lengerich	BVL-102A	9819
7590	05/06/2013		EXAMINER	
Douglas J. Taylor, Esq. General Mills, Inc. P.O. Box 1113 Minneapolis, MN 55440			ROBERTS, LEZAH	
			ART UNIT	PAPER NUMBER
			1612	
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			05/06/2013	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/782,320	VAN LENGERICH, BERNHARD H.	
	<b>Examiner</b>	<b>Art Unit</b>	
	LEZAH ROBERTS	1612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 30 November 2012.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_\_; the restriction requirement and election have been incorporated into this action.
- 4) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 5) Claim(s) See Continuation Sheet is/are pending in the application.
  - 5a) Of the above claim(s) 94 is/are withdrawn from consideration.
- 6) Claim(s) \_\_\_\_\_ is/are allowed.
- 7) Claim(s) 25-31, 34, 35, 37-40, 42, 46, 50, 52-59, 61, 62, 64-67, 69, 70, 73, 75, 79, 81-85, 91-93, 95-97, 101, 103, 105 and 108-112 is/are rejected.
- 8) Claim(s) \_\_\_\_\_ is/are objected to.
- 9) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 10) The specification is objected to by the Examiner.
- 11) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>20 Nov 2012 &amp; 30 Nov 2012</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application |
|  | 6) <input type="checkbox"/> Other: _____ .                        |

Continuation of Disposition of Claims: Claims pending in the application are 25-31, 34, 35, 37-40, 42, 46, 50, 52-59, 61, 62, 64-67, 69, 70, 73, 75, 79, 81-85, 91--97, 101, 103, 105 and 108-112 .

## **DETAILED ACTION**

Applicants' arguments, filed November 30, 2012, have been fully considered. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claims***

#### **Claim Rejections - 35 USC § 103 – Obviousness (Previous Rejections)**

1) Claims 25, 26, 28, 30, 31, 35, 37-40, 46, 91, 92, 101, 108 and 109 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Schiltz (US 5,449,708) in view of Farquharson et al. (US 4,888,174).

### ***Response to Arguments***

#### **Applicant's Arguments**

Applicant argues that neither Schiltz nor Farquharson et al, taken alone or in combination teach or suggest the use of a plasticized mass comprising starch which is neither substantially destructured nor substantially dextrinized, as claimed. A destructured starch and a dextrinized starch are gelatinized, because destructuring and dextrinization occur after gelatinization. A gelatinized starch or a pregelatinized starch

does not have to be destructured and does not have to be dextrinized. As disclosed in the present application when a gelatinized starch or a pregelatinized starch is employed in the present invention, it is not substantially destructured and it is not substantially dextrinized. Gelatinization may be defined as the collapse (disruption) of molecular orders within the starch granule, manifested in irreversible changes in properties such as granular swelling, native crystallite melting, loss of birefringence, and starch solubilization. See Atwell et al. However, destructuring of starch occurs after gelatinization and involves increased granular swelling, exudation of molecular components (i.e. amylose, followed by amylopectin) from the granule, and eventually, total disruption of the granules. Dextrinization involves breaking down of the molecular components into shorter chain molecules. Further, the claims have been amended to more clearly indicate that the starch is neither substantially destructured nor substantially dextrinized. Applicant further argues that the starch of Schiltz is clearly substantially destructured, with the starch molecules being exuded from the granules for polymerization. Applicant further asserts that crystallinity of the molecules in the starch granules can be changed to amorphous regions within the starch granules, without having the molecules of starch exude from the granule. To the contrary, in the process of Schiltz, the starch molecules are exuded from the granules and the granules are destroyed, which is a substantial destructuring. Schiltz also discloses a method for the continuous preparation of a starch-based biodegradable polymer. A homogeneous mixture of starch, an ethylene acrylic acid co- polymer, and a salt of stearic acid are premixed before addition of an aqueous lubricant material. An increase in temperature

gelatinizes the starch and melts the co-polymer. Excess moisture is removed under reduced pressure and a plastic material is extruded. The starch is gelatinized prior to and during dispersion within the ethylene acrylic acid copolymer and, optionally, polyethylene. According to Schiltz, "Gelatinization disrupts the starch granules, providing access to individual starch molecules. Extensive gelatinization is critical for compatibility of the starch with the copolymer component and, later, with respect to biodegradability." An aqueous solution of lubricant, having a preferred pH, with the appropriate temperature and sheer forces, is employed to affect the desired degree of gelatinization. The Schiltz gelatinization "disrupts the starch granules and provides access to individual starch molecules to compatabilize the starch for use in the plastic material, and at the same time increase biodegradation. Schiltz clearly wants to destroy the starch granules so that the individual starch molecules or amylose can interact with the copolymer and polyethylene to form a polymer composite. Schiltz does not teach or suggest avoiding destructuring or dextrinization, or the use of low shear or high amounts of plasticizer, or extrusion residence time, screw speeds, and screw configurations to achieve plasticization without substantial destructurization or dextrinization of the starch. To the contrary, Schiltz employs a critical pH of 10-12, preferably accomplished with the addition of sodium hydroxide, to disrupt the starch granules and provide access to individual starch molecules to achieve interaction between the components to obtain a polymer composite. Farquharson et al does not cure the above-discussed deficiencies in the disclosure of Schiltz. The reference does not disclosure the use of starch or avoiding destructurization or dextrinization of starch.

Even if the pellet sizes employed by Farquharson et al were used in the process of Schlitz, applicant's claimed invention would not be obtained or rendered obvious.

Examiner's Response

The Examiner submits that Schlitz does not disclose that its starches are dextrinized or destructured. Schlitz discloses that the starches are in a combination with a copolymer and a salt. The starches are gelatinized, and the starch granules are disrupted. This appears to coincide with the definition supplied by Applicant, which states the starch is solubilized. Further the starches are mixed with the second component and are not polymerized as Applicant asserts. Schlitz discloses that "the starch component is substantially gelatinized before and during its mixture with the copolymer and/or additional polymeric components" (col. 4, lines 32-35). Therefore this appears to meet the limitation of pre-gelatinized recited by the instant claims. Furthermore, Applicant provides no limiting definition of gelatinization in the instant specification and the definition provided by Applicant is one of three provided by Atwell. One of the definitions disclosed in Atwell and asserted by Applicant is "Starch gelatinization is the collapse (disruption) of molecular order within the starch granule manifested in irreversible changes in properties such as granular swelling, native crystalline melting, loss of birefringence and starch solubilization". The solubilizing of the starch would appear to encompass the starch granules being disrupted and the starch molecules being released as disclosed by Schlitz. Further the instant specification does

not appear to clearly define what is meant by destructured and it would appear destructured would encompass any type of change in the starch granule, including plasticization, because it changes at least the internal structure of the starch molecule. Thus because the starches of Schlitz are gelatinized and disrupted; the starches of the instant claims are pre-gelatinized; and Atwell discloses gelatinization includes disrupting the starch, birefringence and solubilization, the starches of Schlitz appear to meet the limitations of the instant claims. Further, the claims recite "substantially" dextrinized nor destructured. Considering that there is no definition for the term "substantially", it is interpreted to mean that there is some dextrinization and destructurezation. Therefore the starches of Schiltz meet the limitations of the instant claims. Farquharson et al. cures the deficiencies of Schlitz by disclosing the size of pellets suitable for use in agriculture. Therefore the rejection is maintained.

2) Claims 25-31, 34, 35, 37-40, 46, 50, 52-59, 61, 62, 64-67, 69, 73, 75, 79, 81-83, 85, 91, 92, 93, 95-97, 101, 103, 105, 108, 109, 111 and 112 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Loomis et al. (US 5,852,114) in view of Newton et al. (US 4,938,967).

***Response to Arguments***

**Applicant's Arguments**

Applicant argues that neither Loomis et al nor Newton et al, taken alone or in combination teach or suggest the use of a plasticized mass comprising starch which is neither substantially destructured nor substantially dextrinized, as claimed. Even if the references were properly combinable, applicant's claimed products would not be obtained or rendered obvious. Applicant argues that, a destructured starch and a dextrinized starch are gelatinized, because destructuring and dextrinization occur after gelatinization. A gelatinized starch or a pregelatinized starch does not have to be destructured and does not have to be dextrinized. As disclosed in the present application when a gelatinized starch or a pregelatinized starch is employed in the present invention, it is not substantially destructured and it is not substantially dextrinized. See Applicant's response above in regard to the definition of gelatinization.

Applicant further argues that the starch of Loomis et al is clearly substantially destructured, with the starch molecules being exuded from the granules for polymerization. However, crystallinity of the molecules in the starch granules can be changed to amorphous regions within the starch granules, without having the molecules of starch exude from the granule. To the contrary, in the process of Loomis et al, the starch molecules are exuded from the granules and the granules are destroyed, which is a substantial destructuring. Further, Loomis et al. disclose the use of extrusion temperatures of 170 to 205 °C in the blending zone and within the range of 210 to 225 °C in the last zone and the extruder die. Loomis desires destructured starch and employs extrusion conditions to destructure starch. In the present specification, low shear mixing, low temperature and plasticizer amounts, and extrusion residence time, screw speeds,

and screw configuration are employed to achieve plasticization without substantial destructurization or dextrinization of the starch. Loomis et al does not teach or suggest avoiding destructuring or dextrinization, or the use of low shear or high amounts of plasticizer, or extrusion residence time, screw speeds, and screw configurations to achieve plasticization without substantial destructurization or dextrinization of the starch. To the contrary, Loomis et al employs high extrusion temperatures, a high L/D, intensive mixing conditions, and low moisture contents to obtain destructured starch and a thermoplastic composition.

Furthermore, as evidence that the Loomis et al extrusion would result in destructuring of the starch component, as discussed in the March 28, 2012 Amendment, Bastioli et al discloses that from a microphotograph relating to their comparative experiment 1, it is apparent that the extrusion temperature of 100 °C. is too low and does not allow the destructuring of the starch because the microphotograph shows the presence of a large number of still intact starch granules. The analysis, it is disclosed, of the product obtained from example 2 (extrusion temperature 120 °C.) shows that the number of intact starch granules has been substantially reduced, although some are still present. On the other hand, it is disclosed, a complete destructuring of the starch is obtained according to example 3 with an extrusion temperature of 140 °C. The microphotographs obtained from the material of example 3 does not show intact starch granules according to Bastioli et al. The Loomis et al method employs much more intense extrusion conditions than those of Bastioli et al which would clearly destroy intact starch granules resulting in substantial destructuring

by the extrusion temperatures of 170 to 205 °C in the blending zone and within the range of 210 to 225 °C in the last zone and die, and also with the use of a very high L/D of 38, and the removal of any water in the first zone of the extruder, all of which would result in substantial destructuring of starch. Newton et al does not cure the above-discussed deficiencies in the disclosure of Loomis et al. Even if the references were properly combinable, employment of a starch binder of Newton et al in the process and composition of Loomis et al would still result in substantial destructurization of the starch because it would be subjected to the intense extrusion conditions of Loomis et al. In regard to claims 111 and 112, the native starch or modified starch of Loomis et al employed as an ingredient would still be substantially destructured because it would be subjected to the intense extrusion conditions of Loomis et al, as described above.

Examiner's Response

The Examiner submits that in regard to the pre-gelatinized starch not having to be destructured and dextrinized, as stated above, Atwell (the reference submitted by Applicant) discloses "Starch gelatinization is the collapse (disruption) of molecular order within the starch granule manifested in irreversible changes in properties such as granular swelling, native crystalline melting, loss of birefringence and starch solubilization". Therefore, gelatinized starch does appear to have some destructuring.

In regard to the starches of Loomis et al. being clearly substantially destructured, Loomis et al. do not disclose that the starch granules are destroyed or that the starch is extruded from the granules. Further col. 2, lines 16-20 appears to refer to the prior art

and not the starches of the instant claims. Loomis also discloses that the starch that may be used include gelatinized starch as well a destructureized starch. This indicates that gelatinized starch is not considered destructured starch. Considering this is a suitable starch for use in the disclosed compositions, Loomis et al do not appear to desire only destructured starches.

In regard to the compositions of Loomis et al forming a melt, the instant claims encompass matrices with more than starch and recite that the matrices are homogeneous. Loomis et al. disclose mixing more than one polymer together to form a homogeneous mixture. There appears to be no disclosure in Loomis et al that the starch is polymerized with another polymer. Further, the compositions of Loomis et al form a melt and the compositions disclosed by the instant specification form a melt (page). Therefore the starches of Loomis et al. forming a melt does not necessarily mean that the starches are destructured and it cannot be concluded that the starches of Loomis et al that are not destructured are destructured during the mixing process of Loomis et al. In regard to the temperature, there is no recitation of temperature in the instant claims and Applicant has provided no evidence that the when Loomis et al. uses gelatinized starch in the compositions and not destructureized starch, that the process of Loomis et al would lead to destructureization of the starch. In regard to Loomis not disclosing the conditions disclosed by the instant specification, although the specification provides guidance for claim interpretation, the claims do not recite these limitations. The claims encompass processes other than that disclosed that make matrices wherein the starches are not "substantially destructured" nor "substantially dextrinized". Further,

Loomis et al. specifically differentiates between destructured starch and gelatinized starch and discloses either one may be used. Applicant refers to Bastioli et al., which discloses temperatures of 120 degrees C substantially reduce starch granules. It is asserted that temperatures above this destructure the starch. The instant specification discloses temperatures of 150 degrees and therefore, based on Bastioli et al., one would reasonably expect that the granules disclosed by Applicant are destructured. Therefore considering there appears to be no clear definition of what "substantially destructured" is, the gelatinized starches of Loomis et al. are concluded to be not substantially destructured. Newton et al. cures the deficiencies of Loomis et al. by disclosing the amount of active ingredient, pellet size and coatings. Therefore the rejection is maintained.

3) Claims 42, 69, 70, 84 and 108-110 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Loomis et al. (US 5,852,114) in view of Newton et al. (US 4,938,967) as applied to claims 25-31, 34, 35, 37-40, 46, 50, 52-59, 61, 62, 64-67, 69, 73, 75, 79, 81-83, 85, 91, 92, 93, 95-97, 101, 103, 105, 108 and 109 in further view of Tye et al. (US 5,308,636). The rejection is maintained.

### ***Response to Arguments***

#### *Applicant's Arguments*

See Applicant's arguments above in regard to Loomis et al. in view of Newton et al. Applicant further asserts that Tye et al does not cure the deficiencies in the

disclosures of Loomis et al and Newton et al discussed above. Even if all three references were properly combinable, applicant's claimed invention would not be obtained or rendered obvious. None of the references, taken alone or in combination teach or suggest the use of a plasticized mass comprising starch which is neither substantially destructured nor substantially dextrinized. Even if the references were properly combinable, employment of semolina of Tye et al in the process and composition of Loomis et al would still result in substantial destructureization of the starch because it would be subjected to the intense extrusion conditions of Loomis et al as discussed above.

Examiner's Response

See the Examiner's Response in regard to Loomis et al. in view Newton et al. and in regard to Applicant's arguments regarding the substantial destructureization of the starch due to the conditions of Loomis et al. Tye et al. cures the deficiencies of Loomis et al. and Newton et al. by disclosing different sources of starch. One of ordinary skill would reasonably conclude that the starches of Tye et al. would be suitable for the compositions of Loomis et al. in view Newton et al. because they are used in ingestible compositions. Further, one of ordinary skill in the art would recognize that if a component, such as flour, is a source of starch that it would be suitable to use it when a starch component is desired.

4) Claims 25-31, 34, 35, 37-40, 46, 50, 52-59, 62, 64-67, 69, 73, 75, 79, 81-83, 85, 91, 92, 93, 95-97, 101, 103, 105, 108 and 109 were rejected under 35 U.S.C. 103(a) as being unpatentable over Newton et al. (US 4,938,967) in view of Fishman et al. (US 5,451,673). The rejection is maintained and withdrawn in regard to claim 34.

***Response to Arguments***

**Applicant's Arguments**

Applicant argues that neither Newton et al nor Fishman et al, taken alone or in combination teach or suggest the use of a plasticized mass comprising starch which is neither substantially destructured nor substantially dextrinized, as claimed. Even if the references were properly combinable, applicant's claimed products would not be obtained or rendered obvious. As discussed above, a destructured starch and a dextrinized starch is gelatinized, because destructuring and dextrinization occur after gelatinization. A gelatinized starch or a pre-gelatinized starch does not have to be destructured and does not have to be dextrinized. As disclosed in the present application when a gelatinized starch or a pre-gelatinized starch is employed in the present invention, it is not substantially destructured and it is not substantially dextrinized (see Applicant's Arguments above). Applicant further asserts the definition of gelatinization (see Applicant's Arguments above). The starch of Fishman et al is clearly substantially destructured, with the starch molecules being exuded from the granules. Further, crystallinity of the molecules in the starch granules can be changed to amorphous regions within the starch granules, without having the molecules of starch exude from the granule. To the contrary, in the process of Fishman et al, the starch

molecules are exuded from the granules and the granules are destroyed, which is a substantial destructuring. Further, Fishman et al teach that the "gelatinized starch solution is prepared by mixing starch with water and heating it above the boiling point of water under pressure for a sufficient time to break down starch granules." Additionally, Fishman et al employs a starch solution which indicates use of a large amount of water and heating and pressure conditions which provide exudation of the starch molecules from the granules resulting in substantial destructuring for formation of a solution.

Examiner's Response

The Examiner submits that in regard to Applicant's definition, it is not clear if Applicant is referring to pasting when discussing destructureization after gelatinization. However, the definition provided by Applicant states that gelatinization includes solubilization, which would appear to encompass dissolving the granules. Further it appears that pasting is synonymous with the term gelatinization according to Definition 3 of Atwell. Therefore it is not clear from the instant specification, what Applicant is considering destructured because there appears to be no one specific definition of gelatinization as shown by Atwell and there appears to be no clear definition in the instant specification. In regard to Fishman et al. disclosing the breakdown of the granules, the definition provided by Applicant states that gelatinization involves solubilization. Therefore it appears that the gelatinization and dissolving is not encompassed by "substantially destructured". (Also see Examiner's responses above).

5) Claims 25, 26, 28, 30, 31, 35, 37, 38-40, 46, 50, 52, 53, 55, 56, 58, 59, 62, 64-67, 69, 73, 75, 79, 81, 83, 91-93, 95-97, 101, 103, 105, 108, 109, 111 and 112 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Desaga (DE 19503993) in view of Loomis et al. (US 5,852,114).

***Response to Arguments***

**Applicant's Arguments**

See Applicant's arguments above in regard to Loomis et al. Applicant further argues that neither Desaga et al nor Loomis et al, taken alone or in combination teach or suggest the use of a plasticized mass comprising starch which is neither substantially destructured nor substantially dextrinized, as claimed. Even if the references were properly combinable, applicant's claimed products would not be obtained or rendered obvious. Further, were the references properly combinable, employment of the plasticized starch of Loomis et al in the process and composition of Desaga would result in substantial destructureization of the starch because it would be subjected to the intense extrusion conditions of Loomis et al.

**Examiner's Response**

See Examiner's Response above in regard to Loomis et al. Therefore, Loomis et al. cures the deficiencies of Desaga et al., and the starches of Loomis et al. do not appear to be "substantially" destructured nor "substantially" dextrinized.

**Obvious-Type Double Patenting (Reinstated Rejection)**

Claims 25 and 52 were rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 15 of U.S. Patent No. 7,201,923 (previously 09/233,443, claim 21). The rejection has been reinstated. The rejection is also applied to claims 30, 31, 37-40, 42, 46, 55, 56, 58, 59, 64, 69, 70, 73, 75, 81-85, 91, 92, 95, 101, 103, 105 and 108-110.

Applicant will submit a terminal disclaimer upon an indication of allowable subject matter.

The Examiner has not indicated allowable subject matter. Therefore the rejection is maintained.

Claims 25-31, 34, 35, 37-40, 42, 46, 50, 52-59, 61, 62, 64-67, 69, 70, 73, 75, 79, 81-85, 91-93, 95-97, 101, 103, 105 and 108-112 are rejected.

Claim 94 is withdrawn.

No claims allowed.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEZAH ROBERTS whose telephone number is (571)272-1071. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frederick F. Krass can be reached on 571-272-0580. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lezah W Roberts/  
Primary Examiner, Art Unit 1612